

D1  
Contd

ii) a portion of an immunoglobulin, wherein the portion specifically binds with KDR,  
and  
iii) a conjugated vascular endothelial growth factor,  
thereby obtaining a KDR<sup>+</sup> cell population that is enriched for long-term repopulating HSCs.

D2

9. ~~10.~~ (Twice Amended) The method of claim 1, wherein the reagent is a  
conjugated vascular endothelial growth factor.

D3

10. ~~11.~~ (Thrice Amended) A method of preparing long-term repopulating human  
HSCs, the method comprising isolating hematopoietic progenitor cells (HPCs) from a human  
hematopoietic tissue and separating HPCs that express KDR on their surface (KDR<sup>+</sup> HPCs)  
from HPCs that do not express KDR on their surface using a reagent selected from the group  
consisting of

i) an antibody that specifically binds with KDR,  
ii) a portion of an immunoglobulin, wherein the portion specifically binds with KDR,  
and  
iii) a conjugated vascular endothelial growth factor,  
whereby the isolated KDR<sup>+</sup> HPCs are enriched for long-term repopulating HSCs.

D4

33

11. ~~51.~~ (Thrice Amended) A method of expanding long-term repopulating human  
HSCs, the method comprising isolating HSCs that express KDR on their surface (KDR<sup>+</sup> HSCs)  
from a human hematopoietic tissue using a reagent selected from the group consisting of  
i) an antibody that specifically binds with KDR,  
ii) a portion of an immunoglobulin, wherein the portion specifically binds with KDR,  
and  
iii) a conjugated vascular endothelial growth factor

and incubating the HSCs with vascular endothelial growth factor to expand the HSCs.

D5

36. ~~69.~~ (Thrice Amended) A method of isolating a stem cell capable of giving rise  
to at least one of a muscle cell, a hepatic oval cell, a bone cell, a cartilage cell, a fat cell, a

tendon cell, and a marrow stroma cell, the method comprising isolating a hematopoietic cell that expresses KDR on its surface from a human hematopoietic tissue using a reagent selected from the group consisting of

- i) an antibody that specifically binds with KDR,
- ii) a portion of an immunoglobulin, wherein the portion specifically binds with KDR,  
and
- iii) a conjugated vascular endothelial growth factor,  
thereby isolating the stem cell.

41. (Amended) A method of obtaining a cell population enriched for long-term repopulating human hematopoietic stem cells (HSCs), the method comprising isolating hematopoietic cells from a human hematopoietic tissue and separating cells that express KDR on their surface but do not express a late marker on their surface from cells that either do not express KDR on their surface or express a late marker on their surface, the isolation method comprising using a reagent selected from the group consisting of

- i) an antibody that specifically binds with KDR,
- ii) a portion of an immunoglobulin, wherein the portion specifically binds with KDR,  
and
- iii) a conjugated vascular endothelial growth factor,  
thereby obtaining a cell population that is enriched for long-term repopulating HSCs.

42. (Amended) A method of preparing long-term repopulating human HSCs, the method comprising isolating cells that express KDR on their surface and do not express a first early marker on their surface ( $KDR^+ early^-$  cells) using, sequentially in either order, an antibody which specifically binds with the first early marker and a reagent selected from the group consisting of

- i) an antibody which specifically binds with KDR,
- ii) a portion of an immunoglobulin, wherein the portion specifically binds with KDR,  
and
- iii) a conjugated vascular endothelial growth factor.